

## TAU BETA PI FELLOWS FOR 1974-75

Tau Beta Pi-Honeywell Fellow No. 34	BRADLEY J. HOLCOMB	Arizona Beta '74 Arizona State University
Tau Beta Pi-Honeywell Fellow No. 35	PETER T. KENYON	Massachusetts Epsilon '74 Northeastern University
Tau Beta Pi-3M Fellow No. 11	GARY L. HUBBARD	California Epsilon '74 University of California, Los Angeles
Tau Beta Pi-Industrial Nucleonics Fellow No. 3	DONALD J. GLASER	Kansas Gamma '74 Kansas State University
Tau Beta Pi-Spencer Fellow No. 19	E. LOYD SPEER, JR.	California Iota '73 California State University, Los Angeles
Tau Beta Pi-King Fellow No. 13	MARVIN E. BORGMAYER	Missouri Beta '74 University of Missouri-Rolla
Tau Beta Pi-Hollander Fellow No. 2	BERT BLACK	Maryland Beta '74 University of Maryland
Tau Beta Pi-Sigma Tau Fellow No. 1	STEVEN R. BRAMMER	Texas Eta '74 University of Texas at Arlington
Tau Beta Pi Fellow No. 187	ROLF J. ENGELBRECHT	Connecticut Alpha '74 Yale University
Tau Beta Pi Fellow No. 188	DORA NG KWOK	New York Omicron '73 State University of New York, Stony Brook
Tau Beta Pi Fellow No. 189	DONALD H. SEBASTIAN	New Jersey Alpha '74 Stevens Institute of Technology

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**BRADLEY J. HOLCOMB**, Tau Beta Pi-Honeywell Fellow No. 34, is a 25-year-old senior in engineering science (industrial systems option). He expects to graduate from Arizona State University in December and begin work on the master's degree in industrial engineering at Arizona State in January 1975. He ranks first academically in his class of 375 and has a 4.0 grade average. Married, he is a veteran of the U.S. Air Force and plans, upon completing the master's degree, to enter industrial research and development before returning to graduate school to study for the Ph.D. He is a member of Phi Eta Sigma, Alpha Pi Mu, and the A.I.E.E. He is secretary of the Engineering College Council, a student organization, and has been an active member of the University Scholarship and Financial Aid Committee. In addition, he has devoted time to tutoring. He has also been active in the civic affairs of the Phoenix Metropolitan Area, particularly in a recent debate on freeway construction.

**PETER T. KENYON**, Tau Beta Pi-Honeywell Fellow No. 35, graduated from Northeastern University in June after a five-year honors program leading to both the B.S. and M.S. degrees in electrical engineering. Now 23 years old, he plans to study at M.I.T. for the Ph.D. so that he can do research and teach at the

university level in the field of electromagnetic and plasma theory. As an undergraduate at Northeastern he was engaged in research with the communication group of the Dana Research Center, where he tested communication devices such as transmitters and voltage-controlled oscillators. He also participated in a tutoring project sponsored by Eta Kappa Nu and has been employed part-time as a tutor in algebra and geometry to high school students. His parents live in New Bedford, Mass.

**GARY L. HUBBARD**, Tau Beta Pi-3M Fellow No. 11, graduated in June from the University of California, Los Angeles, with the B.S. degree in mechanical engineering (energy and kinetics). Though he is only 20 years old, he has already accumulated credits for the M.S. degree, which he hopes to complete at U.C.L.A. by the end of the spring 1975 term. He intends to devote his time this summer to his M.S. thesis project, "An Experimental Study of Binary Condensation on Enhanced Heat Exchanger Tubes," for which he will design, build, test, and perform preliminary data-taking on the equipment. During the coming academic year he plans to take a full load of courses. For doctoral study he will go to the University of California, Berkeley, to perform theoretical research in heat

and mass transfer. His ultimate goal is work in industry. As a student at U.C.L.A. he has been active in Tau Beta Pi's tutoring project and has served as cataloger of California Epsilon. His parents live in Northridge, Calif.

**DONALD J. GLASER**, Tau Beta Pi-Industrial Nucleonics Fellow No. 3, graduated in May with the B.S. in mechanical engineering from Kansas State University and will enter graduate school in the fall at Purdue University. Areas of particular interest to him are systems dynamics, controls, and systems optimization in preparation for a career in engineering, ultimately, perhaps, in engineering management. For three summers during his undergraduate career he has worked with the research and development division of a manufacturer of offset printing presses and other graphic arts equipment; he began as a draftsman but gradually advanced to work in design. On his campus he was named the outstanding mechanical engineering student in both his junior and senior years, and he has been extremely active in campus activities, having been president of his social fraternity, a member of Pi Tau Sigma, a charter member of the new Kansas Gamma chapter of Tau Beta Pi, and a member of Phi Kappa Phi.

**E. LOYD SPEER, JR.**, Spencer Fellow in civil engineering from California, Office of the B.S. in California State University, December 1973. He was a graduate student at Stanford University, served as president of the Engineering Convention, serving as chairman of the committee. He was a member of the Chi Epsilon student chapter, tends to be a designer and to design of eventually engineering his parents' Calif.

**MARVIN E. BORGMAYER**, King Fellow in Missouri Beta in 1973 national chemical engineering of Missouri-tends to be an alma mater begun research study of oil the Alaskan engineering requirement in engineering part-time student. He was engaged in process design will gain from this summer Phi Kappa Phi served as president of the A.I.C.E. council. He and his parents live in

**BERT BLACK**, Fellow No. 2, University of Maryland degree in civil to study water Institute of 28 years old, Corps from duty in Vietnam the development water resource research assistant space Research Germany, engaged in many, engaged in mechanics. He numerical modeling to movement and plants in water local chapter and of Chi Phi Kappa student chapter edited a biweekly



experienced otherwise. This experience has led me to the conclusion that what is needed today is individuals with cross-field knowledge to solve the problems.

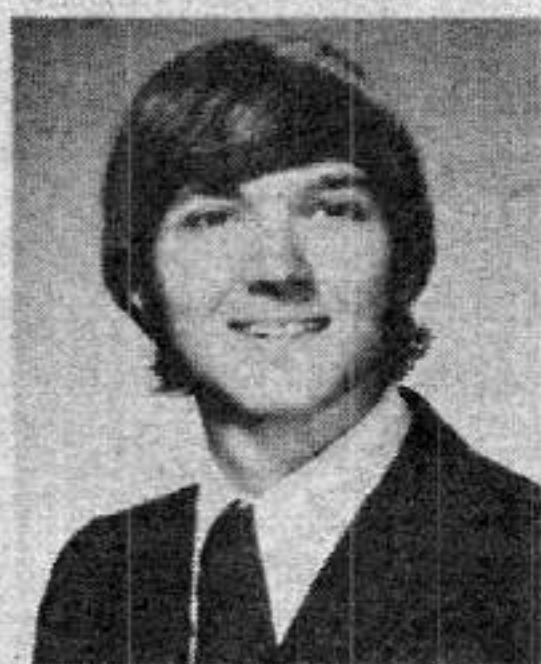
After receiving my master's degree in June I intend to spend the summer working for TRW Systems, Redondo Beach. I feel that my practical experience there will help me in the future. Since I hope eventually to become a university professor, being able to impart this experience to my students should make me a better teacher. My work at TRW is likely to be in the area of thermochemical ablation.

Next fall I begin work at the University of California, Berkeley. I have been fortunate enough to be granted a National Science Foundation Fellowship that will provide financial support during my tenure there. I will continue my work in the field of heat and mass transfer, but as of now I have not selected a field of further specialization. I may do work there in solar energy development or coal gasification.

I am very thankful for my opportunities at U.C.L.A. My experiences have all been very pleasurable and interesting, and I have always found the staff and faculty here to be both helpful and friendly. I express my deepest thanks to my advisors, Anthony Mills and Vernon Denny, for their interest in me both as a person and a student.

Thanks again to the Fellowship Committee, Dr. Paul Robbins, 3M Corporation, and Robert Nagel for offering me the opportunity to continue my education without the worry over finances.

#### DONALD J. GLASER, *Kansas Gamma '74*, TAU BETA PI-INDUSTRIAL NUCLEONICS FELLOW No. 3



Donald J. Glaser

The atmosphere surrounding my graduate work at Purdue University has been non-rigid, yet guided enough to challenge me to develop the confidence and ability I sought in my continued education. There is a great deal of satisfaction in knowing that I learned what I desired to learn and feel that this year's experience has been the perfect complement to my undergraduate work.

Several factors were significant in my choice of graduate schools. I sought a strong automatic controls and instrumentation expertise along with a good, practical, design-oriented research project in the area of control and compensation. Purdue offered both.

It is not surprising that I am a research assistant in the Automatic Controls Center within the mechanical engineering department. My research project deals with active chatter control for a lathe boring bar, beginning with machine tool chatter theory and progressing to design, construction, and finally testing of an active compensator of my own design. It bridges the theory-to-"real world" gap, something that I feel is vitally important at the graduate level.

Purdue is located in West Lafayette, IN, which is across the Wabash River from Lafayette. Around 28,000 students attend this campus, and it includes one of the largest engineering enrollments in the nation. The surrounding countryside is gentle and hilly with the rural element quite evident. Not surprising is Purdue's strong agricultural curriculum. People here claim the Midwest, though it's several hundred miles east of where I call Midwest. I have thoroughly enjoyed Purdue and recommend it highly.

My personal doubts for a doctoral candidacy which remained through the fall semester are finally settled. I am far too eager to use my education in industry to make anything past the master's level a temptation presently. As I mentioned, my area is automatic controls. This actually includes dynamic systems, instrumentation, and modeling. I enjoy working with mechanical systems where original design and analysis are involved. I will complete my thesis some time this fall. My classwork ended with spring finals, and I see no reason for remorse at this fact. Now only serious research will occupy my time until graduation.

As I said earlier, my work has been a pleasant experience. I owe much to the support from my Tau Beta Pi Fellowship. When I joined Tau Beta Pi as a Kansas State charter member, I never dreamed that I would receive such an award. It has enabled me to concentrate fully on school and has allowed me time to pursue interesting digressions that often present themselves within the course of graduate work. Consequently, I am grateful for the Tau Beta Pi-Industrial Nucleonics Fellowship, and I thank the Fellowship Committee for the honor and aid of this fellowship. I would also like to acknowledge the working of Robert Nagel for his very dependable attention in all the fellowship business and communications.

#### E. LOYD SPEER, JR., *California Iota '73*, TAU BETA PI-SPENCER FELLOW No. 19



E. Loyd Speer, Jr.

My past year at Stanford University has proven to be an experience I'll never forget. The master's degree has been a goal in my mind since my first day of college in Glendale, CA. Thanks to Tau Beta Pi, the Fellowship Committee, Dr. Paul H. Robbins, and Mr. Robert H. Nagel, I'll be receiving the M.S. degree in structural engineering this June.

Stanford's structural engineering department has broadened my knowledge in various categories of structural analysis and design. However, most of my study time was spent on a variety of courses from earthquake engineering to the finite element method. Plenty of time was directed toward studying. Never let it be said that Stanford's engineering students have free time on their hands. Actually I spent many Friday and Saturday nights attempting to catch up on homework assignments. When I wasn't in educational pursuit at home, I could be located at the computation center.

Actual course work is not all that has strengthened my engineering abilities. I attended many seminars where students have the opportunity to get together as a group to listen to practicing engineers speak on subjects they find interesting. These seminar topics ranged from "Computer Graphics in Production Structural Analysis" to "Earthquake Dynamics Without Mathematics."

Stanford's structural engineering department is fairly compact. It consists of four full-time professors and several visiting instructors. Since only about 35 students per year are working together for the M.S. degree in structures, the students and professors have the opportunity to achieve a personal level of educational development. This compactness does not limit the vast range of facilities available to the students. For example, the recently developed John A. Blume Earthquake Engineering Center was established to promote research and education in earthquake engineering. It consists of a structural dynamics laboratory and a Fourier analyzer laboratory. Soon the data-processing lab, now under development, will add to the completion of the center.

There are so many lectures, film series, guest speakers, and experimental programs at Stanford University that one could easily become a full-time sponge, soaking up a tremendous amount of knowledge, without even taking any courses for credit. Someday it would be nice to try this, but I know I will never have the opportunity.